

CLAIMS

We claim:

1. A filter screen for use in filtering water, the filter screen comprising:
a frame;
5 a grid assembly supported by the frame for movement, the grid assembly including
a continuous unbroken drive chain having multiple guide links
joined together in end-to-end relation and defining joints between the guide links,
and multiple seal plates positioned in end-to-end relation and overlapping the joints
10 between the guide links;
a screen panel coupled to one of the multiple guide links for
selective movement between an operating condition where the screen panel is fixed
relative to the guide link for movement with the guide link and for filtering water
and a maintenance condition where the screen panel is pivotable relative to the
15 guide link to permit access to the filter screen.
2. The filter screen of claim 1, wherein the grid assembly further includes an
additional continuous unbroken drive chain having a guide link, wherein the screen panel
is coupled to the guide link of the additional drive chain for selective movement between
20 the operating condition where the screen panel is fixed relative to the guide link of the
additional drive chain for movement with the guide link of the additional drive chain and
for filtering water and the maintenance condition where the screen panel is pivotable
relative to the guide link of the additional drive chain to permit access to the filter screen.
- 25 3. The filter screen of claim 1, wherein the grid assembly further includes a
bushing coupled to the guide link, wherein the screen panel includes an end member
having a hook that engages the bushing in the operating condition and that disengages
from the bushing in the maintenance condition.
- 30 4. The filter screen of claim 3, wherein the screen panel moves linearly
relative to the guide link to disengage the hook from the bushing in the maintenance
condition.

5. The filter screen of claim 4, wherein the guide link includes a projection, and wherein the end member includes a slot having a longitudinal axis, the projection being positioned within the slot such that the screen panel pivots about the projection and moves linearly along the slot axis in the maintenance condition.

5

6. The filter screen of claim 5, wherein the guide link includes a hole, wherein one of the multiple seal plates includes a hole, and wherein the projection is a fastener positioned in the holes of the guide link and the seal plate.

10

7. The filter screen of claim 5, further comprising a fastener that couples the guide link, one of the multiple seal plates, and the screen panel together in the operating condition.

15

8. The filter screen of claim 7, wherein the guide link includes a hole, the seal member includes a hole, and the end member includes a hole, the fastener being positioned in the holes of the guide link, the seal plate, and the end member in the operating condition.

20

9. The filter screen of claim 8, wherein the hole of the end member is positioned between the slot and the hook.

10. The filter screen of claim 1, wherein one of the multiple seal plates is coupled to the guide link for movement with the guide link.

25

11. The filter screen of claim 10, wherein the guide link includes a bearing surface that engages a tracking system of the filter screen, and wherein the seal plate includes a surface projecting past the bearing surface to maintain the drive chain on the tracking system by deterring outward lateral movement of the drive chain.

30

12. The filter screen of claim 10, wherein the seal plate is positioned between the guide link and the screen panel.

13. The filter screen of claim 1, wherein the grid assembly forms a closed loop having an interior, and wherein the screen panel is pivotable to a position permitting access to the interior of the closed loop.